

REMARKS

Claims 1-9 are all the claims that are under consideration in this application.

Claim Rejections - 35 U.S.C. § 112, first paragraph

Claims 1 and 5 are rejected under 35 U.S.C. 112, first paragraph, for containing subject matter which the Examiner asserts is not described in the Specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Applicant respectfully traverses the rejection.

The Examiner states that the subject matter was not adequately described in the specification to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The Examiner further states that a belt "with an elastic layer that varies in hardness, either over time or space, and a projecting amount that varies with the varying hardness in the belt...is not disclosed in the specification." (See page 2, paragraph 3, lines 4-6 of the April 24, 2001 Office Action).

Accordingly, Claims 1 and 5 have been amended to better clarify its meaning and to clarify that elasticity of the material affects the ability of the high hardness particles to vary their projection, not simply that the elasticity allows for projection, but that the projection varies with pressure applied to the belt from an external source as well as shape and hardness of the member to be fed and the shape and hardness of the high hardness particles.

Claims 1 and 5 are described in the Specification in such a way as to enable one skilled in the pertinent art to make or use the invention. (See, e.g., page 4, lines 30 - 32) The different ranges for the high hardness particles as well the hardness of the elastic material are explicitly stated. *See Id.* Additionally, the composition of elastic materials are varied for distinct

characteristics (See page 5, lines 18-21; See also page 6, lines 7-12). Therefore, the Specification does, in fact, disclose a belt with an elastic layer that varies in hardness. Additionally, the Specification discloses a belt with an elastic layer that varies in the projecting amount of high hardness particles that vary with the pressure applied to the belt from an external source (e.g., varying hardness in the belt). Thus, Applicant respectfully submits that amended Claims 1 and 5 are enabled by the Specification and the rejection under 35 U.S.C. § 112, first paragraph should be withdrawn.

Claim Rejections - 35 U.S.C. § 112, second paragraph

Claims 1-9 have been rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant respectfully traverses the rejection.

Claims 1, 2, 5 and 6 have been amended to better clarify their meaning. Applicant notes that the amendments address each of the concerns raised by the Examiner in paragraph 5 of the April 24, 2001 Office Action. Specifically, Claims 1 and 5 have been amended to distinctly define the high hardness particles. Additionally, for Claims 2 and 6, Applicant has adopted the Examiner's comments pointing out the high hardness particles. Accordingly, Applicant submits that Claims 1-9, as amended, are definite, and respectfully requests that the rejection of Claims 1-9 under 35 U.S.C. § 112, second paragraph, be withdrawn.

Claim Rejections - 35 U.S.C. § 102(b)

Claim 1 has been rejected under 35 U.S.C. § 102(b) as being anticipated by Frandsen. This rejection is traversed.

The Examiner states that Frandsen shows "a belt with high hardness particles 36 projecting from the surface of an elastic material comprising (See Fig. 3)." (See pages 3-4, paragraph 7 of the April 24, 2001 Office Action). Examiner goes on to say that it is "inherent that under load conditions (caused for instance by conveyed materials of different shapes and hardnesses) the particles will project various amounts due to resiliency of the rubber because the greater pressures will cause greater load on the individual particles." (See *Id.*)

Amended Claim 1 is directed to a feed belt comprising an elastic material containing high hardness particles dispersed throughout the elastic material. The projecting amount of high hardness particles of the present invention depends not only on the elasticity of the elastic material, it varies according to the pressure applied to the belt from an external source. Such pressure applied to the belt from an external source can be a tension applying pulley which stretches the feed belt and causes the high hardness particles to be projected from the surface of the feed belt. (See Specification, page 11, lines 18-24). Figure 4(B) depicts the dynamic nature of the projection of the high hardness particles.

Frandsen discloses a carrier film for carrying a flexible material such as cigar-wrapper tobacco leaves wherein the carrier film and the tobacco leaves are rolled onto a spool and stored in that fashion until ready for use. (See Frandsen, column 4, lines 34-44; See also Figures 6-8).

Thus, Frandsen discloses a carrier film made of a flexible material with glass beads imbedded therein. It does not recite a feed belt whose projecting amount of said high hardness particles varies according to the pressure applied to the belt from an external source. As Frandsen fails to teach each and every element of Claim 1, the rejection of Claim 1 under 35 U.S.C. § 102(b) should be withdrawn.

Claim Rejections - 35 U.S.C. § 103

Claims 1-9 have been rejected under 35 U.S.C. § 103 as being unpatentable over Arnold in view of Saylor, Jr. (See pages 4-5, paragraph 9) This rejection is respectfully traversed.

Arnold discloses a belt for use in agricultural applications, in particular for use in round, hay balers. The belts disclosed in Arnold have reinforced edges, which are achieved by folding, fabric wrapping, or reinforcement by hard elastomers. (See the Abstract.) In addition, the belts include outer skims 82 and 84 formed of elastomer. (See column 10, lines 10-20.) However, as noted by the Examiner, Arnold does not disclose, among other things, high hardness particles dispersed throughout an elastic material.

Saylor discloses a slip-resistant floor system, and a method for making the same. (See, e.g., Column 1, lines 11-13.) Applicant, again, notes that it is not apparent that Saylor qualifies as analogous prior art, given that it is neither in the field of Applicants' endeavor nor is it evident that a slip-resistant floor is reasonably pertinent to the problem addressed by the Applicant, namely development of a feed belt which can endure changes in environment, which has sufficient hardwearing characteristics while not damaging the members being fed, and which maintains a high coefficient of friction. (See page 3, lines 9-13.).

Claims 1 and 5

Amended Claim 1 is directed to a feed belt comprising an elastic material containing high hardness particles dispersed throughout the elastic material. The projecting amount of high hardness particles of the present invention depends not only on the elasticity of the elastic material, it varies according to the pressure applied to the belt from an external source. The elastic material for the present invention is suitable for hardwearing movement due to high use

frequency. (See Specification, page 2, lines 17-25; See also page 3, lines 12-13). It supports the high hardness particles in a manner that permits variable projection. Similarly, Claim 5 includes a high hardness particle layer comprising a second elastic material and high hardness particles dispersed throughout the second elastic material. The second elastic material is suitable for hardwearing movement due to high use frequency. It also supports the high hardness particles in a manner that permits variable projection.

Arnold fails to disclose high hardness particles dispersed throughout an elastic material. In fact, Arnold fails to disclose an elastic material suitable for hardwearing movement due to high use frequency that supports the high hardness particles in a manner that permits variable projection. Saylor does not supply the deficiency of Arnold, with respect to (1) high hardness particles dispersed throughout an elastic material; and with respect to (2) elastic material suitable for hardwearing movement due to high use frequency that supports high hardness particles in a manner that permits variable projection. Accordingly, Claims 1 and 5 are not obvious over Arnold and Saylor, and the rejection under 35 U.S.C. § 103 should be withdrawn.

Claims 2 and 6

Claim 2 is directed to a feed belt comprised of elastic material containing high hardness particles. Claim 6 is directed to a feed belt comprised of a base layer comprised of a first elastic layer and a particle containing layer comprised of a second elastic material containing high hardness particles. The belt in Arnold fails to disclose any high hardness particles. In fact, Examiner states that Arnold “does not show a particle containing layer, the layer 10-70% of its weight composed of 3-300 micrometer particles.” (See page 4, paragraph 9, lines 12-13). Examiner states that Saylor “show[s] a layer 16 with 3-300 micrometer sized particles (col. 3,

lines 57-61) and comprising 10-70% of the weight of the layer (col. 3, line 40 - col. 4, line 30).” (See *Id.* at lines 13-15).

Examiner goes on to state that it “would have been obvious to one of ordinary skill in the art to modify the second elastic layer 82 of Arnold by adding the particles as taught by Saylor, Jr. to provide enhanced friction on the load surface of the belt. It is inherent under various load conditions...the particles will project various amounts due to the resiliency of the rubber...” (See pages 4-5, paragraph 9)

However, mere allegations by the Examiner that certain differences between the claimed subject matter and the prior art are obvious do not create a presumption of unpatentability. *In re Soli*, 137 USPQ 797 (CCPA 1963). Rather, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. *In re Fine*, 5 USPQ2d 1596 (CAFC 1988). This burden can only be satisfied by an objective teaching in the prior art or by cogent reasoning that knowledge is available to one of ordinary skill in the art. *In re Lalu*, 223 USPQ 1257 (CAFC 1984). The Examiner’s reasoning for holding the differences between the claimed invention and the prior is based, not on knowledge generally available from the prior art but, rather, on the Applicant’s own disclosure of problems existing in the prior art devices and the Applicant’s solution thereof.

Furthermore, the Examiner may not rely on official or judicial notice at the point where novelty is argued, but must come forward with the pertinent prior art. *Ex parte Cady*, 148 USPQ 162 (Bd. App. 1965). Thus, contrary to the Examiner’s position, the Examiner has failed to provide any evidence whatsoever that one of ordinary skill in the art would have been motivated to make a feed belt comprised of elastic material containing high hardness particles absent Applicant’s own teaching as a guide.

While the Examiner relies on Saylor for allegedly teaching modifying the second elastic layer 82 of Arnold by adding the particles as taught by Saylor, Saylor clearly fails to make up for the deficiencies noted in Arnold. In particular, Saylor discloses particles provided in a static, non-variable, non-projecting surface defined in Saylor as a wood floor. Thus, as is clear from the above discussion, Saylor has nothing whatsoever to do with belts used for agricultural applications such as round hay balers. For this reason, one of ordinary skill in the art would not have combined Arnold and Saylor in the first place to somehow arrive at the present configuration, absent Applicant's own teaching as a guide. Such impermissible hindsight reconstruction is clearly improper.

Furthermore, even if, *arguendo*, Arnold and Saylor were somehow combined, one of ordinary skill in the art would not have modified or substituted the static, non-variable, non-projecting surface defined in Saylor for the belt of Arnold so as to provide a feed belt which supports the high hardness particles in a manner that permits variable projection. In no way would one of ordinary skill in the art have been motivated to modify either Arnold or Saylor to somehow support the high hardness particles with respect to their projection according to pressure applied from an external source since neither reference even remotely suggests adjusting the belt tension and projection of high hardness particles with respect to the feed belt.

The Examiner states that Claims 6-8 do not recite particles "dispersed throughout" the elastic layer. (See page 6, paragraph 11, lines 6-8). Claim 6 has been amended to include this limitation.

Applicant submits that Claims 2 and 6 are not obvious over Arnold and Saylor for at least these reasons. Accordingly, Applicant respectfully requests that that rejection of claims 2 and 6 under 35 U.S.C. § 103 be withdrawn.

Claims 3-4, 7-9

Examiner states that as to Claims 3 and 7, Arnold discloses a filament in the central portion of the belt (see fig. 8B). (See page 5, paragraph 9, lines 3-4) For Claims 4 and 8, Examiner states a “filament disposed on the driving surface” is not disclosed but that it would have been an obvious matter of design choice...” (See *Id.* at lines 5-9). Finally, for Claim 9, Examiner noted that the hardness of the second material is less than the hardness of the first. (See *Id.* at lines 10-11)

Claims 3 and 4 contain by reference all the limitations in claim 2, and hence are patentably distinguishable for at least the same reasons. Thus, dependent claims 3 and 4 are patentable at least by virtue of their dependence from amended claim 2, which Applicant submits is now in condition for allowance.

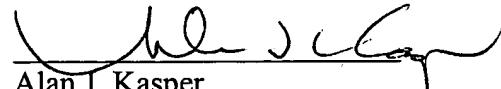
Claims 7, 8 and 9 contain by reference all the limitations in claim 6, and hence are patentably distinguishable for at least the same reasons. Thus, dependent claims 7, 8 and 9 are patentable at least by virtue of their dependence from amended claim 6, which Applicant submits is now in condition for allowance .

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,



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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims are amended as follows:

1. (Twice Amended) A feed belt comprising:

an elastic material; and

high hardness particles dispersed throughout the elastic material,

characterized in that the high hardness particles project from a feed surface, where the projecting amount of said high hardness particles increases with the elasticity of the elastic material when a member to be fed is fed, and the projecting amount of said high hardness particles varies according to the pressure applied to the belt from an external source, which said pressure applied to the belt from an external source varies with the shape or hardness of the member to be fed, and the projecting amount of said high hardness particles varies according to the shape and hardness of said high hardness particles. ← n.m. *not always*

2. (Twice Amended) A feed belt comprising:

10 to 70 percent by weight of high hardness particles, said high hardness particles having a particle diameter of 3 to 300 μm ; and

an elastic material having a hardness corresponding to rubber hardness 15 to 90 and containing the high hardness particles.